



**General Medicine:**  
**PAIN MANAGEMENT**  
**Medical Protocol**

**Patient Care Goals:**

1. Compassionately manage all patients with pain.
2. Minimize adverse events in the treatment of pain.

**Patient Presentation:**

Inclusion Criteria

All patients with pain may benefit from non-pharmacological intervention.  
All patients with acute traumatic pain, cancer related pain, or sickle cell crisis with moderate or severe pain should be screened for analgesia administration.  
Paramedic clinical judgment for other conditions or situations.

Exclusion Criteria

None

**\* Fentanyl Treatment:**

0.5 to 1 mcg/kg to a maximum initial single dose of 100 mcg.  
Repeat dosing up to a maximum subsequent dose of 100 mcg can be given every 10 minutes.  
Maximum cumulative dose of 300 mcg over duration of transport if needed.  
Provider judgement and patient response should guide dosing strategy; caution with hypotension.

**§ Ketamine Treatment:**

0.1 mg/kg for IV/IO (must be diluted)  
0.3 mg/kg for IM (must be diluted)  
Dosing chart next page below for ease of dosing.  
May repeat q 10mins for a total of 3 doses.  
Ideal for painful EMS procedure, patients with hypotension or at risk for hypoventilation; PRN alternative to opioids.  
Dilution Instructions: 1 mL of ketamine (500 mg/5mL solution) in 9 mL of NS to yield a concentration of 10 mg/mL. Use smallest syringe where appropriate.

**Minor Pain or Adjunctive Treatment:**

**Acetaminophen**

10 to 15 mg/kg max of 1,000 mg PO  
(can use tablets for larger patients)

**Ketorolac**

0.5 mg/kg IV/IO Max of 10 mg  
1 mg/kg IM Max 60 mg

**Quality Improvement:**

Key Documentation Elements

1. Initial and re-occurring pain score (numeric, FACES or FLACC)
2. Pulse Oximetry
3. ETCO<sub>2</sub> as directed
4. Subsequent need for BVM or naloxone

**Patient Safety Considerations:**

Non-invasive capnography to assess for hypoventilation as needed or directed; use escalation of stimulation, NPA/OPA airway adjunct, BVM and/or naloxone if hypoventilation occurs/continues.

Pain Management  
Universal Care

Pain Score using  
Numeric, FACES or  
FLACC if cognitive delay

Apply appropriate non-pharmacological  
intervention: splinting, wound care, verbal  
reassurance, redirection, ice, elevation

Moderate or Severe Pain:  
Acute Traumatic Injury  
Cancer Related Pain  
Acute Sickle Cell Crisis

—Option B—

§ Ketamine  
IV/IO/IM  
See Dosage Chart Next  
Page

Option A

\* Fentanyl 0.5 to 1 mcg/kg  
IN/IV/IO/IM

Option C  
Paramedic judgement if patient not  
responding to fentanyl

Minor Pain or Adjunctive Treatment of Moderate/Severe Pain

Acetaminophen  
Ketorolac



## Ketamine IV/IO Pain Management

	Patient Weight										
	<10 kg	10-19 kg	20-29 kg	30-39 kg	40-49 kg	50-59 kg	60-69 kg	70-79 kg	80-89 kg	90-99 kg	>100 kg
Ketamine IV/IO 0.1 mg/kg 500 mg/5mL, diluted to 10mg/1mL** Note: mL listed here are after dilution, per protocol	None	1 mg	2 mg	3 mg	4 mg	5 mg	6 mg	7 mg	8 mg	9 mg	10 mg
		0.1 ml	0.2 ml	0.3 ml	0.4 ml	0.5 ml	0.6 ml	0.7 ml	0.8 ml	0.9 ml	1 ml

**\*\*1 mL of ketamine (500 mg/5mL solution) in 9 mL of NS to yield a concentration of 10 mg/mL**

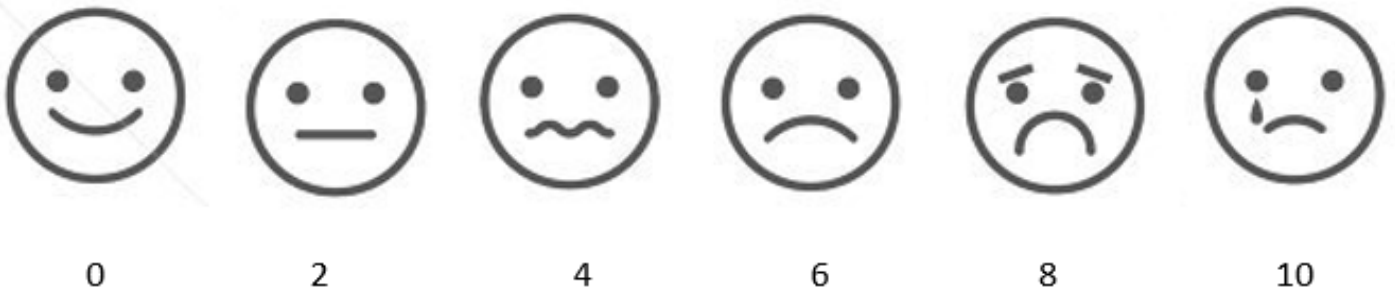
## Ketamine IM Pain Management

	Patient Weight										
	<10 kg	10-19 kg	20-29 kg	30-39 kg	40-49 kg	50-59 kg	60-69 kg	70-79 kg	80-89 kg	90-99 kg	>100 kg
Ketamine IM 0.3 mg/kg 500 mg/5mL, diluted to 10mg/1mL** Note: mL listed here are after dilution, per protocol	1 mg	3 mg	6 mg	9 mg	12 mg	15 mg	18 mg	21 mg	24 mg	27 mg	30 mg
	0.1ml	0.3 ml	0.6 ml	0.9 ml	1.2ml	1.5 ml	1.8 ml	2.1 ml	2.4 ml	2.7 ml	3 ml

**\*\*1 mL of ketamine (500 mg/5mL solution) in 9 mL of NS to yield a concentration of 10 mg/mL**



## Faces Pain Scale



## FLACC Pain Scale

Criteria	Score = 0	Score = 1	Score = 2
Face	No particular expression or smile	Occasional grimace or frown, withdrawn, uninterested	Frequent to constant quivering chin, clenched jaw
Legs	Normal position or relaxed	Uneasy, restless, tense	Kicking, or legs drawn up
Activity	Lying quietly, normal position, moves easily	Squirming, shifting, back and forth, tense	Arched, rigid or jerking
Cry	No cry (awake or asleep)	Moans or whimpers, occasional complaint	Crying steadily, screams or sobs, frequent complaints
Consolability	Content, relaxed	Reassured by occasional touching, hugging, or being talked to, distractible	Difficult to console or comfort

## Numeric Pain Scale

0	1	2	3	4	5	6	7	8	9	10